

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 2-42, and 44-46 are pending in the present application Claims 44 and 45 are amended and Claim 46 is added by the present amendment. Support for the foregoing amendments and additions can be found in the disclosure as originally filed, for example on pages 33-35 of the originally filed disclosure. Thus, no new matter is added.

In the outstanding Office Action, Claims 18 and 36 were rejected under 35 U.S.C. §101, as directed to non-statutory subject matter; Claims 2-9, 11-13, 23, 44 and 45 were rejected under 35 U.S.C. §102(b) as anticipated by Pachet (Constraint-Based Spatialization, Sony Computer Science Lab); Claims 10, 14-17, 21, 24-26, 28, 31 and 36-39 were rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of Lydecker et al. (U.S. Pat. Pub. No. 2003/0028273, herein "Lydecker"); Claims 18, 32 and 42 were rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of O'Connell (U.S. Pat. No. 5,331,111); Claims 19, 20 and 22 were rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of O'Connell in further view of Bargen, B. et al. ("Inside DirectX", Microsoft Press, Redmond, WA, 1998, herein "Bargen"); Claims 27, 29 and 30 were rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of Lydecker in further view of Bargen; Claim 33 was rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of Lydecker in further view of O'Connell; and Claims 34, 35 and 40 were rejected under 35 U.S.C. §103(a) as unpatentable over Pachet in view of Lydecker and O'Connell in further view of Bargen.

With respect to the rejection of Claims 18 and 36 under 35 U.S.C. §101 as directed to non-statutory subject matter, Applicants respectfully traverse the rejection.

Specifically, Claim 18 recites "the system according to claim 44, implemented using a computer readable storage medium including an interface to a computer operating system and

a sound card” and Claim 36 recites “a computer readable storage medium containing data specifically adapted for exploitation by an audio spatialisation control system according to claim 44....”

The outstanding Action states on page 3 that these claims are directed to a computer program per se, however, Applicants traverse this assertion and note that these claims are in fact each directed to a computer readable storage medium. MPEP §2106.01 clearly states “when functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.” Thus, Applicants respectfully submit that Claims 18 and 36 are in fact statutory and respectfully request that the rejection of Claims 18 and 36 under §101, be withdrawn.

Addressing now the rejection of Claims 2-9, 11-13, 23 , 44 and 45 under 35 U.S.C. §102(b) as anticipated by Pachet, Applicants respectfully traverse this rejection.

Claim 44 recites, in part,

- a display configured to display graphical representations of a plurality of audio sources;
- an input unit configured to access an audio stream coded in a common file and composed of the plurality of audio sources associated to audio tracks, the audio tracks each including an analog recording of an audio source;
- a constraint unit configured to receive and process constraints expressing rules for a spatialisation of said audio stream; and
- an interface unit configured to enter spatializing commands to said constraint unit,
- wherein said interface unit enters at least one user input for effecting a spatialisation command on one audio source in a group of two or more audio sources,
- the spatialisation command is effected on the audio sources based on the position of the graphical representation of the audio sources on the display,
- said constraint unit is programmed to process said group of two or more audio sources as a unitary object for the application of the constraints, and
- when a user moves the position of one audio source in said group of two or more audio sources, an algorithm sets the

position on the display for the other audio sources in the group of two or more audio sources based on the constraints.

Claim 45 recites a method claim that includes similar features.

Pachet describes a music spatialisation application used within the MIDI context. Specifically, Pachet is the basis for the EP0961523 reference discussed on page 2, line 8 to page 3, line 14 of the present specification.

However, the Pachet publication focuses only on the handling of MIDI tracks. However, there are a number of disadvantages to using MIDI tracks. For instance, MIDI tracks each require a unique file for each track making the mixing of MIDI tracks difficult. Further, MIDI is not a widely used format and only codes very specific kinds of audio tracks of which analog recordings are not included.

Therefore, in light of the fact that Pachet describes a system that only uses MIDI tracks, this reference cannot be used to anticipate “an input unit configured to access an audio stream coded in a common file and composed of the plurality of audio sources associated to audio tracks, the audio tracks each including an analog recording of an audio source,” as is recited in Claim 44.

In other words, the MIDI sound sources of Pachet cannot be interpreted to be equivalent to an audio stream coded in a common file, as the MIDI tracks of Pachet are each included in an individual file. In addition, the MIDI tracks of Pachet do not include *an analog recording of an audio source*. The outstanding Action states on page 4 that the MIDI tracks “are actually a representation of an analog audio sound as they indicate a specific analog sound to be replicated when they are reproduced.”

However, MIDI tracks cannot be interpreted as *including* an analog recording of an audio source, as no analog recording is included in the MIDI track. Specifically, analog recordings of audio sources do not provide the digital information necessary to derive a score usable by a MIDI instrument and a MIDI instrument cannot handle analog recordings of

audio sources. Thus, a system designed to use MIDI tracks is not equivalent to a system that uses analog recordings of audio sources.

Thus, Applicants respectfully submit that Claim 44 and similarly Claim 45 patentably distinguish over Pachet at least for the above noted reasons.

In addition, newly added Claim 46 recites a decoding unit configured to decode the audio stream coded in the common file and extract the plurality of audio sources from the common file. Pachet clearly does not describe or suggest this feature as the plurality of audio sources (i.e. MIDI tracks) in Pachet are not coded in a common file and thus do not need to be decoded.

Addressing now the constraint unit recited in Claim 44, Applicants respectfully submit that this feature is not described or suggested in Pachet.

With respect to the constraint unit Claim 44 recites

said constraint unit is programmed to process said group of two or more audio sources as a unitary object for the application of the constraints, and

when a user moves the position of one audio source in said group of two or more audio sources, an algorithm sets the position on the display for the other audio sources in the group of two or more audio sources based on the constraints.

The outstanding Action states on page 3

First it should be noted in section three that a problem that the paper tries to overcome is that "1. Users can move only one object at a time, which may be cumbersome in a lot of situations." This indicates that user's are able to move multiple objects jointly. Furthermore, the remaining discussion of section three details how altering one instrument affects the other instruments. Thus, while the user may actually be alter one specific instrument, it alters the others as well, thus this group of altered objects read upon the unitary limitation.

However, Applicants respectfully traverse this assertion. Specifically, as noted above, Claim 44 recites that the constraint unit processes the group of two or more audio sources as a unitary object for the application of the constraints. In contrast, Pachet only

describes that constraints are applied to each object individually. The outstanding Action states that although a user may actually only be able to alter one specific instrument, the user's action alters the other instruments as well. However, Applicants respectfully submit that this has nothing to do with how constraints are applied to the objects in Pachet. Specifically, Applicants respectfully submit that nowhere in Pachet does it describe or suggest that constraints are applied to objects as a unitary object.

In other words, in Pachet, each audio source has individual constraints that are applied to the audio source. When a user moves a single audio source, the constraints of the moved audio source as well as other audio sources and/or the listener are processed to ensure compatibility. In contrast, the claimed invention recites that a group of sources are processed as a unitary object with regard to the application of constraints. In other words, the entire group is given certain constraints as a group. Thus, when a user moves a single audio source, the constraints of the entire group of audio sources are processed for compatibility against other objects not in the group. This feature is not described or suggested in Pachet.

Accordingly, Applicants respectfully submit that independent Claim 44 and similarly Claim 45 and claims depending therefrom patentably distinguish over Pachet.

Moreover, with respect to the further dependent claims, in light of the above discussion, Applicant respectfully submits that those claims also distinguish over the applied art, particularly as none of these further cited teachings to Lydecker, O'Connell and Bargen are believed to overcome the above-noted deficiencies of Pachet.

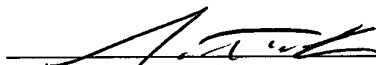
Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

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